LC/NAIROBI

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Distr.: GENERAL

E/ECA/PSD.5/20
25 January 1988

Original: ENGLISH ONLY

UNITED NATIONS

ECONOMIC AND SOCIAL COUNCIL

ECONOMIC COMMISSION FOR AFRICA

Fifth session of the Joint Conference
of African Planners, Statisticians
and Demographers

Addis Ababa, Ethiopia, 21-28 March 1988

REPORT OF THE WORKING GROUP ON ORGANIZATION, CONTENT AND METHODOLOGY OF HOUSEHOLD SURVEYS (with special emphasis on data processing) FOR ENGLISH-SPEAKING AFRICAN COUNTRIES

ADDIS ABABA, 16-20 NOVEMBER 1987

REPORT OF THE WORKING GROUP

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A. ATTENDANCE AND ORGANIZATION OF WORK

1. The Working Group on Organization, Content and Methodology of Household Surveys for English-speaking African countries, with special emphasis on data processing, was held at ECA headquarters, Addis Ababa, from 16-20 November 1987. The meeting was opened by the Deputy Executive Secretary of the Economic Commission for Africa.

2. The Working Group was attended by ten experts from the following countries: Botswana, Egypt, Ethiopia, Lesotho, Nigeria, Zambia and Zimbabwe. The list of participants is attached as Annex I to this report.

3. In view of the practical work to be done on micro-computers, the participants agreed not to elect a bureau. This facilitated to a large extent the organization of work since the participants could at any time interrupt the secretariat to ask questions or make comments.

B. AGENDA

4. The Working Group adopted the following agenda:

1. Opening address
2. Adoption of the agenda
3. African Household Survey Capability Programme (AHSCP): Selected Issues
4. Management and planning of surveys, with special reference to data processing
5. Assessment of hardware and software for survey processing
6. Data entry and data editing
7. Development of a statistical data base
8. Production of reports
9. Evaluation of the Working Group
10. Other business

5. The timetable of the meeting is attached as Annex II to this report.

C. ACCOUNT OF PROCEEDINGS

Opening address

6. In his opening statement, the Deputy Executive Secretary recalled that the present Working Group for English-speaking African countries was the sixth technical meeting organized by ECA on the subject of household surveys in the 80s and that the last one was held in Addis Ababa the week before for the French-speaking group.

7. He then drew the attention of the participants to the important role played by the African Household Survey Capability Programme (AHSCP) in providing data for monitoring the Lagos Plan of Action and the Final Act of Lagos, Africa's Priority Programme for Economic Recovery and the United Nations Programme of Action for African Economic Recovery and Development, 1986-1990 (UN-PAAERD), particularly in the light of the current world economic crisis which especially affects the African region. The Deputy Executive Secretary indicated that these new developments had created the need for a wider range, more reliable and timely statistical data than ever before. He pointed out that it was necessary to have comprehensive statistical information on all basic socio-economic concerns in order to achieve effective development planning and evaluate the impact of development efforts.

8. The Deputy Executive Secretary said that special emphasis had been put on data processing in the present meeting, like the previous one for the French-speaking group, in view of the problems encountered by a number of countries of the region at this stage of the conduct of household surveys. He noted that a number of African national statistical services had acquired their own computer equipment, especially with the spectacular change in recent years with the introduction of powerful micro-computers or personal computers and the availability of a great number of new software packages. He observed that this evolution implied a major modification in the former techniques applied in the use of computers.

9. The Deputy Executive Secretary urged the participants to find ways and means of solving, during their deliberations, the survey data processing problems which had been identified in the background documents submitted to them. These include the absence of a well-designed planning process required in applying new technologies, the lack of computer equipment within

10. Finally, the Deputy Executive Secretary expressed his deep appreciation to the Government of the Federal Republic of Germany which made the organization of the working group possible.

African Household Survey Capability Programme (AHSCP): Selected Issues (Agenda item 3)

11. The secretariat introduced this item on the basis of document ECA/STAT/WGHS/87/1. It was stated that 20 African countries currently participate in the programme but, due to financial problems, only 13 countries are engaged in active survey operations. Even for the latter, the financing of all the planned surveys had not yet been secured in some cases. The secretariat therefore urged the national statistical services (NSS) of the region to use all the opportunities which may arise to try to obtain the financing of their survey programmes.

12. The secretariat also drew the attention of the participants to some other important issues relating to the implementation of these survey programmes within the framework of AHSCP, particularly as regards the lack of qualified personnel in survey organization, sampling, data processing and analysis and the bottleneck existing at the data processing stage in a number of African countries. It was emphasised that particular attention should be given to training of staff and to solving the survey data processing problems which had been identified during the ECA preliminary inquiry on this matter, including lack of disk space, inadequate number of data entry stations and printers, low priority given to statistical work by external computer centres, and some misunderstanding between statisticians and data processing (DP) personnel.

13. In the discussions which followed, the participants recognized that there was a problem of financing household surveys programmes in many African countries. However, some of them felt that this problem was not as acute as it would seem. It was noted that in most of the participating countries, the Government allocated funds for surveys, although this was often inadequate. The participants also pointed out that there were cases where the available resources had not been efficiently used. It was suggested that the management of national statistical services (NSS) should be improved in order to rationalize the use of the limited resources available.

14. The participants were of the view that the assistance of donor agencies was required in the implementation of survey programmes. However, a number of participants observed that some donor agencies were willing to finance only surveys in which they were interested. Also assistance was at times provided in an unco-ordinated manner.

15. The participants considered that the use of long-term internationl experts in household surveys programmes might still be required for some time. A number of participants pointed out that the counterpart staff should be clearly identified before such experts were recruited. Some participants stated that their countries did not gain much from the use of resident experts because the latter first had to learn about the local environment and conditions, which took one year or so, then had to leave on the expiration of their two years contracts.

16. Most of the participants felt that African countries tended to benefit more from the use of short-term experts/consultants which allowed the national staff to take the full responsibility of their survey operations with the necessary guidance. This approach was also cheaper. However, other participants observed that the short period of visit of consultants did not always enable the counterpart staff to gain much benefit from such assistance.

17. A number of participants reaffirmed that statistical work was given a low priority by government computer centres outside the NSS. Some participants however pointed out that this was sometimes the fault of the statistical services concerned which failed to put liaison staff at the data processing centres. NSS should have their own data processing units to enable them to process timely their survey data. Other participants indicated that a low priority was also given to processing of survey data by some data processing units within national statistical services. A suggestion was made that the various sections within the NSS could be equipped with micro-computers in order to contribute to solving such a problem.

18. The participants agreed that survey managers and data processing (DP) staff should work closely together. It was stated that the DP staff sometimes considered themselves as belonging to a separate line. On the other hand, it was also argued that there was often a lack of understanding of DP procedures by statisticians. The meeting was of the opinion that statisticians should have basic training in data processing in order to bridge the gap on this issue and that DP staff should be involved at an early stage in the survey design and planning.

19. The meeting stressed the lack of trained manpower in the field of data processing and recommended that a long term training plan should be adopted in order to solve this problem. The difficulties of identifying suitable candidates to be

trained, funding training and retaining trained personnel were raised. It was suggested that such issues should receive due attention at the national level, taking into account the local conditions. In one country, for example, a committee was set up to find out why the trained staff tended to resign.

20. In concluding the discussions on this agenda item, the meeting was of the view that there should be a government policy regarding computer technology. To this end, an authority vested with the control and the use of information technology should be established. This will also help to solve a number of problems relating to compatibility of computer equipment and maintenance services.

Management and planning of households surveys, with special emphasis on data processing (Agenda item 4)

21. The secretariat introduced the discussion paper and emphasised the need for careful planning and management of the data processing aspects of household survey operations. Careful management was particularly required in an environment of limited resources in order to ensure the most efficient use was made of these resources.

22. The paper suggested that data processing problems would be minimised and more timely results produced if the data processing aspects of the survey were planned in advance of the data collection phase. It was agreed that data processing personnel should be involved in the very early stages of questionnaire design.

23. Various aspects of data processing were commented upon in the paper, for example on the extent to which coding would be carried out in the field or in the office, and the effect that these processing design decisions would affect questionnaire design, resource allocation, etc.

24. The secretariat then illustrated this with a simple example of a critical path analysis and mentioned that software packages were available to assist in this regard. Even without computerisation, some form of activity chart and task planning should be considered essential in project planning.

25. In the discussion on the paper, the participants pointed out that the plans prepared for a survey may occassionally be disrupted by external factors (for example, limited foreign exchange may prevent an essential computer part from being

received on schedule). In response, it was stated that some allowance should be made for contingencies in project planning, but that clearly not every eventuality can be foreseen. Nevertheless, a carefully planned project is less likely to experience slippages than a project which is not so well planned.

26. The suggestion was also made that it would be better to delay data collection if prior investigations showed that a delay was expected in a particular critical task.

27. The participants discussed the centralisation of data entry points versus decentralised systems, and recognised the advantages and disadvantages of each method. They also discussed the use of open ended questions in questionnaire design and the effect of such questions on coding.

28. It was agreed that some balance must be made between pre-coded and other questionnaires. Some pre-coded questionnaires are too large for efficient data collection. In addition, the experience in some countries was that interviewers forced responses to fit the available printed codes. Careful attention needs to be given to this matter in training and when assessing the extent to which pre-coding would be used.

29. Similarly, some balance was also required between office and field coding, and that this would depend on the survey, the extent of interviewer training, and the complexity of the classification.

30. The delegate from Lesotho mentioned the planned use of German made hand-held computers for data colletion in his country. These machines will be programmed to skip to the next logical question, when the interviewer entered the coded response to a sequencial question.

31. The discussion on this paper concluded with comments on the need to transcribe data. It was agreed that data transcription should be minimised. It appeared that one country has been transcribing data onto code sheets only in respect of previous surveys which were not designed for computerised processing. More recent surveys in that country have been more appropriately designed and data transcription will not be required. Other countries represented at the meeting were not currently transcribing household survey data to coding sheets.

Assessment of hardware and software for survey processing
(Agenda item 5)

32. The secretariat introduced this agenda item on the basis of document ECA/STAT/WGHS/87/3. The document focused on the use of micro-computers, otherwise called PC, which now constitute powerful tools for responding to all the specific needs connected with the survey data processing from questionnaire design to tabulation. It was pointed out that a number of standard software packages operational on the PCs are designed to carry out data entry, data editing and tabulation operations, as well as project analysis and management.

33. The impressive features of PCs include their ability to generate graphics displays, to develop data bases, to provide data handling capabilities for statistical computing, to support word processing and to generate electronic spread sheets. In this connection, the secretariat reviewed and identified the relevant software packages which could be used for the above mentioned purposes.

34. A description of functional components, adapters and peripherals of a PC was made and the genealogy of various types of micro processors given. It was indicated that a PC should be selected on the basis of its intended use. Account should be taken of the possibilities offered for connecting appropriate peripherals. Compatibility, where necessary, with already available equipment should be taken into consideration.

35. Different modes of PCs connections were further explained to the participants. A PC can emulate local or distant screens through adequate means of communications; it can be an alternate console or serially mixed with other workstations. A PC local network can be set up to increase the quantity and the nature of tasks to be accomplished. Through local connection, links between several PCs can be ensured for exchange of information.

36. Some guide configurations were suggested to the participants for various use of PCs such as data entry, an intelligent workstation, data processing and statistical analysis. A mixture of convenient printers may be selected to which the PCs would be linked through adequate means of communications.

37. Finally the secretariat stressed that despite the so called user friendly abilities of the PCs, the training aspect should not be neglected. Indeed it was not enough to give technical training for handling the available equipment, but a comprehensive initiation in micro-computer technology and handling of software was necessary.

38. The discussions on this item referred mainly to:

- the difficulties in selecting appropriate equipment given the large number of dealers
- the problems of maintenance of the PCs since most vendors do not provide for it
- the questions about compatibility of the various equipment

39. It was suggested that the decision to buy a PC and the choice of hardware and software should be guided by persons knowledgeable about the technology. The tasks to be accomplished and the software needs should be fully identified. It was indicated that many problems could be avoided by buying the hardware and software from the same source.

40. The RODE/PC data entry programme written for the Swaziland census was then presented. The participants noted that RODE/PC is a powerful and comprehensive data entry software package. It provides all the capabilities required for input validation, conditional processing and output reformatting. Its menu-driven interface and help functions make it easy to use.

41. Among many facilities are the enter, verify function, and update functions as well as screen layout design, production of the operator statistics and scrolling within a batch.

42. Further explanations were given to the participants on the performance of the software using stand-alone or networked PCs. Unfortunately, the software was not available for the meeting and a live demonstration could not be made.

Data entry and data editing (Agenda item 6)

43. The secretariat presented the document ECA/STAT/WGHS/87/4 concerning the field of data entry and data editing. Special emphasis was given to the data entry and data editing facilities on micro-computer systems since the latter are increasingly used for survey processing in African national statistical services.

44. The advantages of using micro-computers for data entry included low cost of the equipment and existence of standardized software for data entry and data editing.

45. It was pointed out that the main constraint for the efficient use of micro-computers, at least as far as large scale surveys are concerned, is sometimes the insufficient number of micro-computers available in African statistical services.

46. The document described the three major ways of using software for data entry, namely:

- own written software, using a computer language;
- using data base systems; and
- using specialised data entry software

47. In the case of own written data entry software, guidelines for the programming and testing process were outlined in the document. It was recommended to make sure that not too much time be wasted in writing sophisticated programs which are used only once for a single survey.

48. Most data base systems provide the users with a more or less easy way to enter data as they are offering in-built programming languages. With these tools, data entry menus can be created and some basic data checks, like range checks, can be performed during the data entry phase.

49. An example of this type of data entry was presented using the well known data base system for micro-computers, dBASE III plus.

50. In the field of specialized data entry software, the tests conducted by the International Statistical Programs Center (ISPC) of the U.S. Bureau of Census were discussed. These tests covered the programs Entry Manager, Entrypoint, Rode/PC and SIDES PC. Guidelines for the purchase of specialized data entry programs were given based on the findings of the ISPC. The comparative tables showing the capabilities (and weaknesses) of the tested programs, prepared by the ISPC, were attached to the background document for further consideration in the participating countries.

51. The document indicates that versions of the most widely used data editing computer packages, before only accessible on mini-computers or mainframes, are also now available for micro-computers. Among them are the most widely used packages UNEDIT (from UN Statistical Office) and CONCOR (from U.S. Bureau of Census).

52. Some methods of computer editing, namely the "hot" and "cold" deck techniques were discussed. As an example of this type of data editing programs, the CONCOR version 2.4 was presented in more detail. The following were mentioned as the main capabilities:

- structure checks,
- range checks,
- consistency checks,
- automatic correction,
- "error-free" output files, and
- error reports.

53. Finally the structure of the CONCOR system was shown. An example of a CONCOR program (the benchmark tests which come along with the package) and the relevant output were attached to the background document.

54. The document concluded that the use of micro-computers using data base software or specialized data entry programs in connection with data editing software like CONCOR or UNEDIT might suit most requirements of statistical offices in Africa to fulfil the data entry and editing tasks for survey processing.

55. The discussions which followed showed that only three participating countries used micro-computers for data entry, using mainly dBASE as the data entry program (only one participating country used the program Entrypoint, recommended by the ISPC). The remaining participating countries used either mini-computers, mainframes or specialized data entry workstations using the respective operating system facilities. All participating countries but one used own written software for data editing. The remaining country used a mix of CONCOR, UNEDIT and own written programs for data editing.

56. During the practical exercises which followed, the participants were shown the use of the dBASE III plus system to create data entry menus and, without a major DP background, a data entry program using dBASE III plus' programming language. The participants pointed out that the use of such facilities might speed up the data entry programming process considerably in their respective countries.

Development of statistical data base (Agenda item 7)

57. The secretariat presented the paper "Development of a Statistical Data Base", ECA/STAT/WGHS/87/5. It was stated that a statistical data base was different from other data bases as regards the objectives of the data base, its content and processing requirements. The different data files, their structure and access methods were discussed. The general concept of a data base and the main criteria a data base should fulfil were presented. It was explained that there were three different types of data bases, namely hierarchical, network and relational. It was stated that there was no perfect type of data base for all applications. In creating a data base, it was necessary to take into account the non-redundancy, consistency, integration and independence of data. The data base should allow all users to have shared access and also should have a proper system of security and privacy of data.

58. The ECA Statistical Data Base was also presented. It was stated that this statistical data base was an information system where statistical data were compiled, processed and disseminated. It is organized in three levels of data bases integrated into one system of information. The level I data base is a country profile. The level II data base contains the bulk of detailed statistical data. The level III data base contains selected time series data covering the years 1965 to 1990. It contains data on national accounts, trade, population, health, education, labour, industry, agriculture, finance, price, transport and communication and vital statistics. The data included are those which are frequently sought by researchers. The structure of the data base and the different programmes used were also discussed.

59. The development of a statistical data base on micro-computer was also discussed. It was noted that a statistical base might be very big in size and might not fit into micro-computers. However, the number of stored data at a national statistical office might be much less. Moreover all the data might not be required at the same time. As the micro-computer allows for menu driven user guidance, the construction of a subject related data base file was fully transparent to the user. This approach enabled data base managers to load only the part of the data base which was actually needed.

60. It was explained that the planning and conceptual phase for micro-computer data base followed the same guidelines as for the mainframes and mini-computers. All the steps required for the creation of statistical data base and the capabilities of the d/BASE III plus data base management system for micro-computers were presented.

61. The participants shared their experiences and problems at their national statistical services. The problem of retaining trained personnel and in general shortage of staff was discussed. It was also mentioned that there was a problem of co-ordination of work between DP personnel and statisticians. Questionnaires were designed by the statisticians without consulting the DP experts. This had led to various problems when processing the data using computers. It was stated that micro-computers could help in solving some of these problems, especially when the data to be processed were not large, as micro-computers were designed for non-programmers.

Production of reports (Agenda item 8)

62. The secretariat introduced document ECA/STAT/WGHS/87/6 and mentioned that micro-computers can be used to create texts of reports and this can be done through the use of appropriate word processing software packages such as "Wordstar", "Word perfect", etc. The traditional method of typing texts on stencils for reproduction may create problems and also lead to poor quality of output.

63. Word processing was described to be good for reports produced periodically (e.g., annually or bi-annually, etc.). In such a case a few pages of text will usually be repeated each year or half year and the data may simply need to be extended to one half year or year.

64. With respect to graphics, it was mentioned that in some statistical offices these graphics are produced by cartographers or draughtsmen. These days graphic packages exist which can be used to do the same job. More sophisticated graphic packages allow for free hand drawing. In terms of production of tables for the reports, the use of the SPSS package or CENTS 4 package was mentioned and has been found useful in many statistical offices.

65. The combination of graphics and text was mentioned. The new desktop publishing software (like Xerox Ventura Publisher or Adobes page maker) gives the user control over text and graphics compositions. It was mentioned that an easier way of transfering data is to make use of the 8" floppy discs since this media is available on mainframes and mini-computers. This gives the freedom to transfer data from main frame to micro if there is no direct link of the computers.

66. On the hardware requirements for the production of reports, mention was made of the need for a printer and a plotter (for graphics). For better quality reports there is need for a matrix printer with 24 needles. The better choice still is a laser printer. The HP laser jet or laser jet II might provide all what may be needed.

67. The secretariat made proposals regarding the hardware/software needed for the production of reports. These proposals covered good quality reports, better quality reports and highest quality reports. An indication of the amount which might have to be spent for the hardware/software to produce the type of report needed was provided.

68. The methods of report production were described and covered the separate use of software, combined use of software (tables and graphics), use of integrated software and desktop publishing. An example of a report created with a micro-computer available in the annex to the document was decribed to the participants.

69. In the discussion of problems related to the production of reports in the participating countries, it was mentioned that stencils continued to be used in some of the countries for the production of reports, the stencil cutter was found to be particularly helpful in one country.

70. In the preparation of the statistical tables for reports, some of the countries used the SPSS package and others used the Lotus 1.2.3 package to prepare tables nicely for the reports. In one country the camera ready tables were produced on the mainframe computer but some tables had to be retyped on stencil for reproduction.

71. Some of the countries have used micro-computers to produce reports using the Wordstar or Word perfect packages. The reports are usually sent to the government printer of the country for printing either in camera ready form or to be type-set for printing.

72. Whereas in a number of countries graphics are not produced using main frame or micro-computers, the use of a graphic plotter was mentioned by some countries including the use of the chart master to produce graphics.

73. Other problems in the use of micro-computers for the production of reports were that in one country the computers existed but were not functional due to mechanical faults and the country had to order new machines. Another problem related to the availability of the Arabic language versions of the software packages. It was mentioned that progress had been made in this direction in that there now exist word processing packages and also the laser printer in the Arabic language.

74. With regard to the time required to produce reports, the countries provided their individual experiences. Overall the time period ranged from 6 weeks to 3 years. In one country the vetting of the reports caused delays.

75. Problems of availability of the right type of paper, priority given to the jobs at the government printer in relation to other jobs were mentioned by some countries. In one country crop forecasting reports were printed particularly fast because they had to meet the deadline of a crop forecasting committee meeting of the government.

76. Because of delays in the production of reports, other countries have used the idea of a preliminary report to speed up the release of the data to the users although such reports are usually limited and do not contain detailed data.

77. Other problems which were mentioned to have contributed to the delay in the production of reports were lack of proper understanding of the software packages which had been installed (and hence the need to ensure properly trained personnel), the difficulties of equipment maintenance and lack of spare parts for the equipment in some of the countries. Another problem which was also mentioned was the lack of compatibility of the main frame and the micro-computer which can delay the production of reports. It was mentioned that by some participants that the speed of producing reports depended on the volume of the reports and the number of staff allocated to the task.

Evaluation of the working group (Agenda item 9)

78. In order to help ECA to plan future meetings more effectively, the participants were requested to fill an evaluation questionnaire at the end of the meeting. A summary of the results is given hereafter:

79. Regarding the organizational matters, all the participants, except one, indicated that the invitation to the Working Group was received sufficiently in advance. Most of the participants (70 per cent) were of the view that the duration of the meeting was inadequate. Some participants suggested that two weeks would have been more appropriate. About half of the participants considered that the daily working hours were demanding but bearable and the other half stated that these were just right. Most of the participants rated the overall administrative arrangements for the meeting (including availability of furniture, equipment and other aids and local transportation facilities) as very good or good. Only two participants rated the transportation facilities as fair or poor.

80. Concerning the content of the programme for the meeting, most of the participants were of the opinion that the topics for discussion were very relevant and that the introduction to these topics were clear throughout. Two participants indicated that the discussions were theoretically oriented but without any explanations. All the other participants felt that the discussions were practically oriented, or both practically and theoretically oriented. One participant stated that he would have liked the data management issue to be included in the agenda of the meeting. Most of the participants considered that the practical work enabled them to have a clearer understanding of the possibilities offered by the software packages presented while two of them had the opposite view on the ground that some software packages such as RODE/PC, CENTS 4 and CONCOR were discussed without any practical demonstrations. Some participants indicated that they would have also liked other software packages such as MULTIMATE and SPSS to be taught at the meeting.

81. In respect of the documentation, all the participants were of the opinion that it was sufficient and clear.

82. While most of the participants were satisfied with the time allowed for questions and discussions, the majority of them felt that the time allocated to practical work on micro-computers was not sufficient.

83. Considering that the main objective of the working group was to contribute to solving problems encountered at the survey data processing stage and therefore to develop and to strengthen the AHSCP programme, the majority of the participants considered that this objective has only been partially achieved because of time constraint which did not allow more practical work to be done. However, all the participants indicated that the items discussed at the working group were relevant to future activities in the field of the organization and conduct of household surveys in their countries.

84. The participants identified the following as the greatest problems in putting into practice any of the proposals made at the meeting:

(a) Data processing personnel

- Lack of trained manpower
- High turnover of staff
- Budget limitations which prevented national statistical offices from employing more staff

(b) Hardware

- Lack of computer equipment
- Obsolete equipment available
- Lack of disc space
- Available hardware may not support the software packages presented

(c) Software

- Lack of appropriate software packages due to financial problems

(d) Data processing management

- Need for improved management of available resources
- Need for training of DP managers
- Government priority
- Problem of co-ordination of activities

(e) Other topics

- Timeliness of production of survey results

85. The participants were invited to make any suggestions for the improvement of the organization and conduct of future meetings of this kind. A number of participants suggested that the detailed schedule of items to be covered should be sent to them in advance to enable adequate preparation. Some participants were of the view that the packages discussed should not be limited to micros only as some of the national statistical services are main frame users.

86. Finally, the participants considered that the meeting had generated sufficient interest in the use of micro-computers, particularly for survey data processing. They suggested that more examples from the participating countries should be used in future meetings. It was also proposed that participants who have got the necessary experience in the use of specific software packages should be used as resource persons.

Other business (Agenda item 10)

87. Under this agenda item, the secretariat informed the participants about the possibility of getting ECA assistance in the field of household surveys. It was stated that three specialists are available to provide assistance to countries of the region in this area, within the framework of the African Household Survey Capability Programme (AHSCP). These comprise one survey specialist financed by UNDP under an integrated project entitled "Statistical Development Programme for Africa" (SDPA), one regional adviser in household surveys provided by the International Labour Office (ILO) and attached to the regional team of AHSCP, and one data processing specialist under a bilateral co-operation arrangement with the Government of the Federal Republic of Germany.

88. The secretariat also indicated that another regional team, financed by the United Nations Fund for Population Activities (UNFPA) is available to undertake advisory services in the areas of population censuses, demographic surveys, and civil registration and vital statistics projects. As regards particularly the demographic surveys, the services of two regional advisers in demographic statistics, two regional advisers in census/survey cartography and one regional adviser in data processing could be made available on request.

89. The participants were also informed about the existence of the Central Co-ordinating Unit of the National Household Survey Capability Programme (NHSCP) within the United Nations Statistical Office in New York.

90. A suggestion was also made by the participants, under this agenda item, that ECA should propose to African Governments the list of departments or offices which should be involved in training workshops to be organized at the national level under the Inter-censal Training Programme for Sub-Saharan Africa, financed by the Canadian Government through UNFPA, or any other statistical programmes established for the region.